

**IN THE CLAIMS:**

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 25-31 without prejudice or disclaimer, AMEND claims 3, 6, 10, 17, 20 and 22 and ADD new claims 46-71 in accordance with the following:

1. **(original)** An optical disc comprising:  
first and second recording layers on which data are recordable and/or reproducible, the first and second recording layers having a same track spiral direction, wherein, on the first recording layer, a physical address of smallest recording units increases or decreases together with an address of the smallest recording units recorded while recording on the disc, from an inner radius of the first recording layer to an outer radius of the first recording layer.
2. **(original)** The optical disc of claim 1, wherein, on the second recording layer, the physical address increases or decreases together with the recorded address from an inner radius of the second recording layer to an outer radius of the second recording layer.
3. **(currently amended)** The optical disc of claim 1, wherein, on the second recording layer, the recorded address decreases as the physical address increases ~~and-or~~ increases as the physical address decreases, from an inner radius of the second recording layer to an outer radius of the second recording layer.
4. **(original)** The optical disc of claim 1, wherein the physical address is recorded in a form of pits at a front portion of each smallest recording unit.
5. **(original)** The optical disc of claim 1, wherein the physical address is recorded on a track in the form of a wobble.
6. **(currently amended)** An optical disc comprising:  
first and second recording layers on which data are recordable and/or reproducible, the first and second recording layers having the same track spiral direction, wherein, on the first

recording layer, an address of smallest recording units recorded while recording the disc decreases as a physical address of the smallest recording units increases ~~and~~ or increases as the physical address decreases, from an inner radius of the first recording layer to an outer radius of the first recording layer.

7. **(original)** The optical disc of claim 6, wherein, on the second recording layer, the physical address increases or decreases together with the recorded address from an inner radius of the second recording layer to an outer radius of the second recording layer.

8. **(original)** The optical disc of claim 7, wherein the physical address is recorded in a form of pits at the front of each smallest recording unit.

9. **(original)** The optical disc of claim 7, wherein the physical address is recorded on a track in a form of a wobble.

10. **(currently amended)** The optical disc of claim 6, wherein, on the second recording layer, the recorded address decreases as the physical address increases ~~and~~ or increases as the physical address decreases, from an inner radius of the second recording layer to an outer radius of the second recording layer.

11. **(original)** The optical disc of claim 10, wherein the physical address is recorded in a form of pits at the front of each smallest recording unit.

12. **(original)** The optical disc of claim 10, wherein the physical address is recorded on a track in a form of a wobble.

13. **(original)** The optical disc of claim 6, wherein the physical address is recorded in a form of pits at a front portion of each smallest recording unit.

14. **(original)** The optical disc of claim 6, wherein the physical address is recorded on a track in a form of a wobble.

15. **(original)** An optical disc comprising:  
first and second recording layers on which data are recordable and/or reproducible, the

first and second recording layers having opposite track spiral directions, wherein a physical address of smallest recording units increases or decreases together with an address of the smallest recording units recorded during recording on the disc.

16. **(original)** The optical disc of claim 15, wherein the physical address increases or decreases together with the recorded address on the second recording layer.

17. **(currently amended)** The optical disc of claim 15, wherein the recorded address decreases as the physical address increases ~~and~~or increases as the physical address decreases on the second recording layer.

18. **(original)** The optical disc of claim 15, wherein:  
on the first recording layer, the physical address and the recorded address increase or decrease from an inner radius of the first recording layer to an outer radius of the first recording layer; and  
on the second recording layer, the physical address and the recorded address increase or decrease from an outer radius of the second recording layer to an inner radius of the second recording layer.

19. **(original)** The optical disc of claim 15, wherein:  
on the first recording layer, the physical address and the recorded address increase or decrease from an outer radius of the first recording layer to an inner radius of the first recording layer; and  
on the second recording layer, the physical address and the recorded address increase or decrease from an inner radius of the second recording layer to an outer radius of the second recording layer.

20. **(currently amended)** An optical disc comprising:  
first and second recording layers on which data are recordable and/or reproducible, the first and second recording layers having opposite track spiral directions, wherein:  
on the first recording layer, an address of smallest recording units recorded while recording data on the disc decreases as a physical address of the smallest recording units increases ~~and~~or increases as the physical address decreases.

21. **(original)** The optical disc of claim 20, wherein:  
on the second recording layer, the physical address increases or decreases together with the recorded address.

22. **(currently amended)** The optical disc of claim 20, wherein:  
on the second recording layer, the recorded address decreases as the physical address increases ~~and~~or increases as the physical address decreases.

23. **(original)** The optical disc of claim 20, wherein:  
on the first recording layer, the physical address and the recorded address increase or decrease from an inner radius of the first recording layer to an outer radius of the first recording layer, and  
on the second recording layer, the physical address and the recorded address increase or decrease from an outer radius of the second recording layer to an inner radius of the second recording layer.

24. **(original)** The optical disc of claim 20, wherein:  
on the first recording layer, the physical address and the recorded address increase or decrease from an outer radius of the first recording layer to an inner radius of the first recording layer, and  
on the second recording layer, the physical address and the recorded address increase or decrease from an inner radius of the second recording layer to an outer radius of the second recording layer.

25-31 **(cancelled)**

32. **(original)** A method of recording data on an optical disc having first and second recording layers on which data are recordable and/or reproducible, the method comprising:  
recording addresses in respective front portions of smallest recording units of the first and second recording layers wherein:  
the recorded addresses and corresponding physical addresses of the first recording layer vary together according to a direction of travel on the disc; and  
the recorded addresses and corresponding physical addresses of the second recording layer vary together according to the direction of travel.

33. **(original)** The method of claim 32, wherein:  
the recorded and physical addresses of the first recording layer and the recorded and physical addresses of the second recording layer all increase or all decrease together.
34. **(original)** The method of claim 32, wherein:  
the recorded and physical addresses of the first recording layer increase together; and  
the recorded and physical addresses of the second recording layer decrease together.
35. **(original)** The method of claim 32, wherein:  
the recorded and physical addresses of the first recording layer decrease together; and  
the recorded and physical addresses of the second recording layer increase together.
36. **(original)** A method of recording data on an optical disc having first and second recording layers on which data are recordable and/or reproducible by a recording head, the method comprising:  
recording addresses in respective front portions of smallest recording units of the first and second recording layers wherein:  
the recorded addresses and the physical addresses of one of the first and second recording layers vary according to a direction of travel along the disc, and  
the recorded addresses and the physical addresses of the other of the first and second recording layers vary oppositely according to the direction of travel.
37. **(original)** The method of claim 36, wherein:  
the recorded and physical addresses of the first recording layer vary together, and  
the recorded and physical addresses of the second recording layer vary oppositely.
38. **(original)** The method of claim 36, wherein:  
the recorded and physical addresses of the second recording layer vary together, and  
the recorded and physical addresses of the first recording layer vary oppositely.
39. **(original)** A method of recording data on an optical disc having first and second recording layers on which data are recordable and/or reproducible, the method comprising:  
recording addresses in respective front portions of smallest recording units of the first

and second recording layers wherein:

the recorded addresses and the physical addresses of one of the first and second recording layers vary oppositely according to a direction of travel along the disc, and

the recorded addresses and the physical addresses of the other of the first and second recording layers vary oppositely according to the direction of travel along the disc.

40. **(original)** The method of claim 32, wherein the first and second recording layers have a same track spiral direction.

41. **(original)** The method of claim 36, wherein the first and second recording layers have a same track spiral direction.

42. **(original)** The method of claim 39, wherein the first and second recording layers have a same track spiral direction.

43. **(original)** The method of claim 32, wherein the first and second recording layers have an opposite track spiral direction.

44. **(original)** The method of claim 36, wherein the first and second recording layers have an opposite track spiral direction.

45. **(original)** The method of claim 39, wherein the first and second recording layers have an opposite track spiral direction.

46. **(new)** An optical disc comprising:  
first and second recording layers on which data are recordable and/or reproducible, the first and second recording layers having opposite track spiral directions, wherein on the first and second recording layers, a physical address of smallest recording units increases or decreases together with an address of the smallest recording units recorded during recording on the disc.

47. **(new)** The optical disc of claim 46, wherein:  
on the first recording layer the recording address and the physical address increase together from an inner radius of the disc to an outer radius of the disc; and  
on the second recording layer, the recording address and the physical address increase

together from the outer radius of the disc to the inner radius of the disc.

48. **(new)** An optical disc, comprising:

first and second recording layers on which data are recordable and/or reproducible, the first and second recording layers having opposite track spiral directions, wherein on at least one of the first and second recording layers, a physical address of smallest recording units and an address of the smallest recording units recorded during recording on the disc increase or decrease oppositely.

49. **(new)** The optical disc of claim 48, wherein:

on the first recording layer, the recording address increases as the physical address decreases from an inner radius of the disc to an outer radius of the disc; and

on the second recording layer, the recording address increases as the physical address decreases from the outer radius of the disc to the inner radius of the disc.

50. **(new)** An optical disc drive comprising:

an optical disc comprising first and second recording layers on which data are recordable and/or reproducible, wherein on the first and second recording layers, a physical address of smallest recording units increases or decreases together with an address of the smallest recording units recorded during recording on the disc; and

a reader/writer which reads and/or writes data to/from the optical disc.

51. **(new)** The optical disc drive of claim 50, wherein:

on the first recording layer, the recording address and the physical address increase or decrease from an inner radius of the disc to an outer radius of the disc; and

on the second recording layer, the recording address and the physical address increase or decrease from the outer radius of the disc to the inner radius of the disc.

52. **(new)** The optical disc drive of claim 51, wherein:

the first and second recording layers have a same track spiral direction.

53. **(new)** The optical disc drive of claim 51, wherein the first and second recording layers have an opposite track spiral direction.

54. **(new)** An optical disc drive, comprising:  
an optical disc comprising first and second recording layers on which data are recordable and/or reproducible, wherein on at least one of the first and second recording layers, a physical address of smallest recording units and an address of the smallest recording units recorded during recording on the disc increase or decrease oppositely; and  
a reader/writer which reads and/or writes data to/from the disc.
55. **(new)** The optical disc drive of claim 54, wherein:  
on the first recording layer, the recording address decreases as the physical address increases from an inner radius of the disc to an outer radius of the disc; and  
on the second recording layer, the recording address decreases as the physical address increases from the outer radius of the disc to the inner radius of the disc.
56. **(new)** The optical disc drive of claim 55, wherein the first and second recording layers have a same track spiral direction.
57. **(new)** The optical disc drive of claim 55, wherein the first and second recording layers have an opposite track spiral direction.
58. **(new)** The optical disc drive of claim 54, wherein:  
on the first recording layer, the recording address increases as the physical address decreases from an inner radius of the disc to an outer radius of the disc; and  
on the second recording layer, the recording address increases as the physical address decreases from the outer radius of the disc to the inner radius of the disc.
59. **(new)** The optical disc drive of claim 58, wherein:  
the first and second recording layers have a same track spiral direction.
60. **(new)** The optical disc drive of claim 58, wherein the first and second recording layers have an opposite track spiral direction.



61. **(new)** A method of assigning addresses of smallest recording units recorded during recording on an optical disc having first and second recording layers, the method comprising:  
assigning the recording address so that the recording address increases or decreases together with a physical address during recording on the disc.

62. **(new)** The method of claim 61, further comprising:  
assigning the recording address on the first recording layer so that the recording address and the physical address increase or decrease from an inner radius of the disc to an outer radius of the disc; and  
assigning the recording address on the second recording layer so that the recording address and the physical address increase or decrease from the outer radius of the disc to the inner radius of the disc.

63. **(new)** The method of claim 62, wherein:  
the first and second recording layers have a same track spiral direction.

64. **(new)** The method of claim 62, wherein the first and second recording layers have an opposite track spiral direction.

65. **(new)** A method of assigning addresses of smallest recording units recorded during recording on an optical disc having first and second recording layers, the method comprising:  
assigning the recorded address so that on at least one of the first and second recording layers, the recorded address and the physical address increase or decrease oppositely.

66. **(new)** The method of claim 65, further comprising:  
assigning the recording address on the first recording layer so that the recording address decreases as the physical address increases from an inner radius of the disc to an outer radius of the disc; and  
assigning the recording address on the second recording layer so that the recording address decreases as the physical address increases from the outer radius of the disc to the inner radius of the disc.

67. (new) The method of claim 66, wherein:

the first and second recording layers have a same track spiral direction.

68. (new) The optical disc drive of claim 55, wherein the first and second recording layers have an opposite track spiral direction.

69. (new) The method of claim 65, further comprising:

assigning the recording address so that on the first recording layer the recording address increases as the physical address decreases from an inner radius of the disc to an outer radius of the disc; and

assigning the recording address on the second recording layer so that the recording address increases as the physical address decreases from the outer radius of the disc to the inner radius of the disc.

70. (new) The optical disc drive of claim 69, wherein:

the first and second recording layers have a same track spiral direction.

71. (new) The optical disc drive of claim 70, wherein the first and second recording layers have an opposite track spiral direction.